

**Assembly Bill No. 1470**

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Passed the Assembly September 12, 2007

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*Chief Clerk of the Assembly*

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Passed the Senate September 10, 2007

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*Secretary of the Senate*

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This bill was received by the Governor this \_\_\_\_\_ day  
of \_\_\_\_\_, 2007, at \_\_\_\_\_ o'clock \_\_\_\_M.

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*Private Secretary of the Governor*

## CHAPTER \_\_\_\_\_

An act to add the heading of Article 1 (commencing with Section 2851) to, and to add and repeal Article 2 (commencing with Section 2860) of, Chapter 9 of Part 2 of Division 1 of, the Public Utilities Code, relating to solar energy.

## LEGISLATIVE COUNSEL'S DIGEST

AB 1470, Huffman. Solar energy: Solar Water Heating and Efficiency Act of 2007.

(1) Under existing law, the Public Utilities Commission has regulatory authority over public utilities, including gas corporations. The commission is required to implement elements of the California Solar Initiative, which modifies the self-generation incentive program for distributed generation resources and provides incentives to customer-side photovoltaics and solar thermal electric projects under one megawatt. The commission is required to award monetary incentives for up to the first megawatt of alternating current generated by solar energy systems that meet the eligibility criteria established by the State Energy Resources Conservation and Development Commission (Energy Commission). The commission is required to adopt a performance-based incentive program for solar energy photovoltaic systems and is authorized to award monetary incentives for solar thermal and solar water heating devices in a total amount up to \$100,800,000.

This bill would establish the Solar Water Heating and Efficiency Act of 2007. The bill would make findings and declarations of the Legislature relating to the promotion of solar water heating systems and other technologies that reduce natural gas demand. The bill would define several terms for purposes of the act. The bill would require the commission to evaluate the data available from a specified pilot program, and, if it makes a specified determination, to design and implement a program of incentives for the installation of 200,000 solar water heating systems in homes and businesses throughout the state by 2017.

The bill would require the commission, in consultation with the Energy Commission and interested members of the public, to establish eligibility criteria for the solar water heating systems

receiving gas customer funded incentives. The commission would be required to establish conditions on those incentives. The bill would specify that, except for the Solar Water Heating Pilot Program in San Diego, only solar water heating technologies that displace electricity are eligible for a portion of California Solar Initiative funds, as determined by the commission.

The commission would be required to allocate not less than 10% of the overall funds for installation of solar water heating systems for specified low-income residential housing . The bill would extend eligibility for funding pursuant to this program to include residential housing occupied by specified ratepayers. The bill would specify that no moneys be diverted from any existing programs for low-income ratepayers. The bill would specify that the consumer rebates decline over time and be structured to reduce the cost of solar water heating technologies. The Energy Commission, in coordination with the commission, would be required to consider, when appropriate, coupling rebates for solar water heating systems with complementary energy efficient technologies. The commission would be required to report to the Legislature, not later than July 1, 2010, on the effectiveness of the program. The bill would repeal these provisions on August 1, 2018.

(2) Existing law establishes a surcharge on all natural gas consumed in the state to fund certain low-income assistance programs, cost-effective energy efficiency and conservation activities, and public interest research and development. Existing law requires a public utility gas corporation, as defined, to collect the surcharge from natural gas consumers, as specified. The moneys from the surcharge are deposited in the Gas Consumption Surcharge Fund and are continuously appropriated to specified entities, including to the commission, or to an entity designated by the commission, to fund low-income assistance programs, cost-effective energy efficiency and conservation activities, and public interest research and development not adequately provided by the competitive and regulated markets.

This bill would require the commission to fund the program of the Solar Water Heating and Efficiency Act of 2007, for the service territories of the gas corporations, through a surcharge applied to gas customers in those service territories based on the amount of natural gas consumed, not to exceed \$250,000,000 over the course of the 10-year program. The bill would require the commission to

annually establish a surcharge rate for each class of gas customers. The bill would exempt from that surcharge those gas customers participating in the California Alternate Rates for Energy (CARE) or Family Electric Rate Assistance (FERA) programs. The bill would require that the program be administered by the gas corporations or 3rd party administrators, as determined by the commission, and subject to the supervision of the commission.

(3) The bill would require the governing body of each publicly owned utility providing gas service to retail end-use gas customers, to adopt, implement, and finance a solar water heating system incentive program meeting certain requirements, thereby imposing a state-mandated local program.

(4) The California Constitution requires the state to reimburse local agencies and school districts for certain costs mandated by the state. Statutory provisions establish procedures for making that reimbursement.

This bill would provide that no reimbursement is required by this act for a specified reason.

*The people of the State of California do enact as follows:*

SECTION 1. The heading of Article 1 (commencing with Section 2851) is added to Chapter 9 of Part 2 of Division 1 of the Public Utilities Code, to read:

#### Article 1. Solar Energy Systems

SEC. 2. Article 2 (commencing with Section 2860) is added to Chapter 9 of Part 2 of Division 1 of the Public Utilities Code, to read:

#### Article 2. Solar Water Heating Systems

2860. This article shall be known, and may be cited, as the Solar Water Heating and Efficiency Act of 2007.

2861. As used in this article, the following terms have the following meanings:

(a) “Energy Commission” means the State Energy Resources Conservation and Development Commission.

(b) “Gas customer” includes both “core” and “noncore” customers, as those terms are used in Chapter 2.2 (commencing with Section 328) of Part 1, that receive retail end-use gas service within the service territory of a gas corporation.

(c) “kW<sub>th</sub>” means the kilowatt thermal capacity of a solar water heating system, measured consistent with the standard established by the SRCC.

(d) “kWh<sub>th</sub>” means kilowatthours thermal as measured by the number of kilowatts thermal generated, or displaced, in an hour.

(e) “Low-income residential housing” means either of the following:

(1) Residential housing financed with low-income housing tax credits, tax-exempt mortgage revenue bonds, general obligation bonds, or local, state, or federal loans or grants, and for which the rents of the occupants who are lower income households, as defined in Section 50079.5 of the Health and Safety Code, do not exceed those prescribed by deed restrictions or regulatory agreements pursuant to the terms of the financing or financial assistance.

(2) A residential complex in which at least 20 percent of the total units are sold or rented to lower income households, as defined in Section 50079.5 of the Health and Safety Code, and the housing units targeted for lower income households are subject to a deed restriction or affordability covenant with a public entity that ensures that the units will be available at an affordable housing cost meeting the requirements of Section 50052.5 of the Health and Safety Code, or at an affordable rent meeting the requirements of Section 50053 of the Health and Safety Code, for a period of not less than 30 years.

(f) “New Solar Homes Partnership” means the 10-year program, administered by the Energy Commission, encouraging solar energy systems in new home construction.

(g) “Solar heating collector” means a device that is used to collect or capture heat from the sun and that is generally, but need not be, located on a roof.

(h) “Solar water heating system” means a solar energy device that has the primary purpose of reducing demand for natural gas through water heating, space heating, or other methods of capturing energy from the sun to reduce natural gas consumption in a home, business, or any building receiving natural gas that is subject to the surcharge established pursuant to Section 2860, or exempt

from the surcharge pursuant to subdivision (c) of Section 2863, and that meets or exceeds the eligibility criteria established pursuant to Section 2864. “Solar water heating systems” do not include solar pool heating systems.

(i) “SRCC” means the Solar Rating and Certification Corporation.

2862. The Legislature finds and declares all of the following:

(a) California is heavily dependent on natural gas, importing more than 80 percent of the natural gas it consumes.

(b) Rising worldwide demand for natural gas and a shrinking supply create rising and unstable prices that can harm California consumers and the economy.

(c) Natural gas is a fossil fuel and a major source of global warming pollution and the pollutants that cause air pollution, including smog.

(d) California’s growing population and economy will put a strain on energy supplies and threaten the ability of the state to meet its global warming goals unless specific steps are taken to reduce demand and generate energy cleanly and efficiently.

(e) Water heating for domestic and industrial use relies almost entirely on natural gas and accounts for a significant percentage of the state’s natural gas consumption.

(f) Solar water heating systems represent the largest untapped natural gas saving potential remaining in California.

(g) In addition to financial and energy savings, solar water heating systems can help protect against future gas and electricity shortages and reduce our dependence on foreign sources of energy.

(h) Solar water heating systems can also help preserve the environment and protect public health by reducing air pollution, including carbon dioxide, a leading global warming gas, and nitrogen oxide, a precursor to smog.

(i) Growing demand for these technologies will create jobs in California as well as promote greater energy independence, protect consumers from rising energy costs and result in cleaner air.

(j) It is in the interest of the State of California to promote solar water heating systems and other technologies that directly reduce demand for natural gas in homes and businesses.

(k) It is the intent of the Legislature to build a mainstream market for solar water heating systems that directly reduces demand for natural gas in homes, businesses, and government buildings.

Toward that end, it is the goal of this article to install at least 200,000 solar water heating systems on homes, businesses, and government buildings throughout the state by 2017, thereby lowering prices and creating a self-sufficient market that will sustain itself beyond the life of this program.

(l) It is the intent of the Legislature that the solar water heating system incentives created by the act should be a cost-effective investment by gas customers. Gas customers will recoup the cost of their investment through lower prices as a result of avoiding purchases of natural gas, and benefit from additional system stability and pollution reduction benefits.

2863. (a) The commission shall evaluate the data available from the Solar Water Heating Pilot Project conducted by the California Center for Sustainable Energy. If, after a public hearing, the commission determines that a solar water heating program is cost effective for ratepayers and in the public interest, the commission shall do all of the following:

(1) Design and implement a program applicable to the service territories of a gas corporation, to achieve the goal of the Legislature to promote the installation of 200,000 solar water heating systems in homes and businesses throughout the state by 2017.

(2) The program shall be administered by gas corporations or third-party administrators, as determined by the commission, and subject to the supervision of the commission.

(3) The commission shall coordinate the program with the Energy Commission's New Solar Homes Partnership to achieve the goal of building zero-energy homes.

(b) (1) The commission shall fund the program through the use of a surcharge applied to gas customers based upon the amount of natural gas consumed. The surcharge shall be in addition to any other charges for natural gas sold or transported for consumption in this state.

(2) The commission shall impose the surcharge at a level that is necessary to meet the goal of installing 200,000 solar water heating systems, or the equivalent output of 200,000 solar water heating systems, on homes and businesses in California by 2017. Funding for the program established by this article shall not, for the collective service territories of all gas corporations, exceed

two hundred fifty million dollars (\$250,000,000) over the course of the 10-year program.

(3) The commission shall annually establish a surcharge rate for each class of gas customers. Any gas customer participating in the California Alternate Rates for Energy (CARE) or Family Electric Rate Assistance (FERA) programs shall be exempt from paying any surcharge imposed to fund the program designed and implemented pursuant to this article.

(4) Any surcharge imposed to fund the program designed and implemented pursuant to this article shall not be imposed upon the portion of any gas customer's procurement of natural gas that is used or employed for a purpose that Section 896 excludes from being categorized as the consumption of natural gas.

(5) The gas corporation or other person or entity providing revenue cycle services, as defined in Section 328.1, shall be responsible for collecting the surcharge.

(c) Funds shall be allocated for the benefit of gas customers to promote utilization of solar water heating systems.

(d) In designing and implementing the program required by this article, no moneys shall be diverted from any existing programs for low-income ratepayers or cost-effective energy efficiency programs.

2864. (a) The commission, in consultation with the Energy Commission and interested members of the public, shall establish eligibility criteria for solar water heating systems receiving gas customer funded incentives pursuant to this article. The criteria should specify and include all of the following:

(1) Design, installation, and energy output or displacement standards. To be eligible for rebate funding, a residential solar water heating system shall, at a minimum, have a SRCC OG-300 Solar Water Heating System Certification. Solar collectors used in systems for multifamily residential, commercial, or industrial water heating shall, at a minimum, have a SRCC OG-100 Solar Water Heating System Certification.

(2) Require that solar water heating system components are new and unused, and have not previously been placed in service in any other location or for any other application.

(3) Require that solar water heating collectors have a warranty of not less than 10 years to protect against defects and undue degradation.



(4) Require that solar water heating systems are in buildings connected to a natural gas utility's distribution system within the state.

(5) Require that solar water heating systems have meters or other kWh<sub>th</sub> measuring devices in place to monitor and measure the system's performance and the quantity of energy generated or displaced by the system. The criteria shall require meters for systems with a capacity for displacing over 30 kW<sub>th</sub>. The criteria may require meters for systems with a capacity of 30 kW<sub>th</sub> or smaller.

(6) Require that solar water heating systems are installed in conformity with the manufacturer's specifications and all applicable codes and standards.

(b) No gas customer funded incentives shall be made for a solar water heating system that does not meet the eligibility criteria.

2865. (a) The commission shall establish conditions on gas customer funded incentives pursuant to this article. The conditions shall require both of the following:

(1) Appropriate siting and high-quality installation of the solar water heating system based on installation guidelines that maximize the performance of the system and prevent qualified systems from being inefficiently or inappropriately installed. The conditions shall not impact housing designs or densities presently authorized by a city, county, or city and county. The goal of this paragraph is to achieve efficient installation of solar water heating systems and promote the greatest energy production or displacement per gas customer dollar.

(2) Appropriate energy efficiency improvements in the new or existing home or commercial structure where the solar hot water system is installed.

(b) The commission shall set rating standards for equipment, components, and systems to ensure reasonable performance and shall develop standards that provide for compliance with the minimum ratings.

2866. (a) The commission shall provide not less than 10 percent of the overall funds for installation of solar water heating systems on low-income residential housing.

(b) The commission may establish a grant program or a revolving loan or loan guarantee program for low-income residential housing consistent with the requirements of Chapter

5.3 (commencing with Section 25425) of Division 15 of the Public Resources Code. All loans outstanding as of August 1, 2018, shall continue to be repaid in a manner that is consistent with the terms and conditions of the program adopted and implemented by the commission pursuant to this subdivision, until repaid in full.

(c) The commission may extend eligibility for funding pursuant to this section to include residential housing occupied by ratepayers participating in a commission approved and supervised gas corporation Low-Income Energy Efficiency (LIEE) program and who either:

(1) Occupy a single-family home.

(2) Occupy at least 50 percent of all units in a multifamily dwelling structure.

(d) The commission shall ensure that lower income households, as defined in Section 50079.5 of the Health and Safety Code, and, if the commission expands the program pursuant to subdivision (c), ratepayers participating in a LIEE program, that receive gas service at residential housing with a solar water heating system receiving incentives pursuant to subdivision (a), benefit from the installation of the solar water heating systems through reduced or lowered energy costs.

(e) No later than January 1, 2010, the commission shall do all of the following to implement the requirements of this section:

(1) Maximize incentives to properties that are committed to continuously serving the needs of lower income households, as defined in Section 50079.5 of the Health and Safety Code, and, if the commission expands the program pursuant to subdivision (c), ratepayers participating in a LIEE program.

(2) Establish conditions on the installation of solar water heating systems that ensure properties on which solar water heating systems are installed under subdivision (a) remain low-income residential properties for at least 10 years from the time of installation, including property ownership restrictions and income rental protections, and appropriate enforcement of these conditions.

(f) All moneys set aside for the purpose of funding the installation of solar water heating systems on low-income residential housing that are unexpended and unencumbered on August 1, 2018, and all moneys thereafter repaid pursuant to subdivision (b), except to the extent that those moneys are encumbered pursuant to this section, shall be utilized to augment

cost-effective energy efficiency measures in low-income residential housing that benefit ratepayers.

2867. (a) The rebates provided through this program shall decline over time. They shall be structured so as to drive down the cost of the solar water heating technologies, and be paid out on a performance-based incentive basis so that incentives are earned based on the actual energy savings, or on predicted energy savings as established by the commission.

(b) The commission shall consider federal tax credits and other incentives available for this technology when determining the appropriate rebate amount.

(c) The commission shall consider the impact of rebates for solar water heating systems pursuant to this article on existing incentive programs for energy efficiency technology.

(d) In coordination with the commission, the Energy Commission shall consider, when appropriate, coupling rebates for solar water heating systems with complementary energy efficiency technologies, including, but not limited to, efficient hot water heating tanks and tankless or on demand hot water systems that can be installed in addition to the solar water heating system.

2867.1. Not later than July 1, 2010, the commission shall report to the Legislature as to the effectiveness of the program and make recommendations as to any changes that should be made to the program. This report shall include justification for the size of the rebate program in terms of total available incentive moneys as well as the anticipated benefits of the program in its entirety. To facilitate the understanding of how solar water heating systems compare with other clean energy and energy efficiency technologies, all documents related to and rebates provided by this program shall be measured in both kWh<sub>th</sub> and therms of natural gas saved.

2867.2. Except for the Solar Water Heating Pilot Program in San Diego, solar water heating technologies shall not be eligible for California Solar Initiative (CSI) funds, pursuant to Section 2851, unless they also displace electricity, in which case only the electricity displacing portion of the technology may be eligible under the CSI program, as determined by the commission.

2867.3. In order to further the state goal of encouraging the installation of 200,000 solar water heaters by 2017, the governing body of each publicly owned utility providing gas service to retail

end-use gas customers shall, after a public proceeding, adopt, implement, and finance a solar water heating system incentive program that does all the following:

(a) Ensures that any solar water heating system receiving monetary incentives complies with eligibility criteria adopted by the governing body. The eligibility criteria shall include those elements contained in paragraphs (1) to (6), inclusive, of subdivision (a) of Section 2864.

(b) Includes minimum ratings and standards for equipment, components, and systems to ensure reasonable performance and compliance with the minimum ratings and standards.

(c) Includes an element that addresses the installation of solar water heating systems on low-income residential housing. If deemed appropriate in consultation with the California Tax Credit Allocation Committee, the governing board may establish a grant program or a revolving loan or loan guarantee program for low-income residential housing consistent with the requirements of Chapter 5.3 (commencing with Section 25425) of Division 15 of the Public Resources Code.

2867.4. This article shall remain in effect only until August 1, 2018, and as of that date is repealed, unless a later enacted statute, that is enacted before August 1, 2018, deletes or extends that date.

SEC. 3. No reimbursement is required by this act pursuant to Section 6 of Article XIII B of the California Constitution because a local agency or school district has the authority to levy service charges, fees, or assessments sufficient to pay for the program or level of service mandated by this act, within the meaning of Section 17556 of the Government Code.







Approved \_\_\_\_\_, 2007

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*Governor*